Dr. Michael Batie - Cross-Disciplinary Innovator & STEM Education Leader

Dr. Michael Batie, Ph.D. - Founder & President specializing in STEM Education & Aerospace Engineering

LinkedIn: https://www.linkedin.com/in/michael-batie-ph-d-4541529/

Location: Los Angeles, California
Current Role: Founder, STEM Education and Research Collaborative LLC
Leadership Position: President, Los Angeles Council of Black Professional Engineers
Expertise: Aerospace Engineering, Mathematics Education, STEM Outreach
Mathematical Bridge: Applied Mathematics connecting Aerospace Engineering and Educational Methodology

Mathematical Integration Across Disciplines

Dr. Michael Batie exemplifies the modern engineer-mathematician-educator, applying mathematical principles across aerospace engineering, education, and community development to solve complex, interdisciplinary challenges. His major goal is "the promotion of STEM professions to Black youth through hands-on experiences in math and science" and to "change the culture in the Black community towards embracing mathematics as the gateway to success in ALL fields of endeavor."

Mathematical Connections:

- **Primary Field:** Aerospace Engineering using mathematical modeling and computational methods from his 50-year career at TRW and Hughes Aircraft Co.
- **Secondary Field:** STEM Education enhanced by pedagogical mathematics and hands-on mathematical learning approaches
- **Integration Point:** Applied mathematics serves as the foundation for both spacecraft engineering solutions and effective mathematics education methodologies

Career Spanning Five Decades in Mathematical Applications

Dr. Batie has "spent the past 50 years working in aerospace, communications, engineering and physical science milieus," with his STEM career including roles as:

- **Spacecraft Engineer** at TRW and Hughes Aircraft Co. - applying mathematical modeling to aerospace systems
- **Mathematics and Science Teacher** in South Central Los Angeles - translating complex mathematical concepts for K-12 students
- **Adjunct College Professor** - teaching science education with mathematical foundations to prospective teachers
- **Charter School Innovator** - instrumental in startup of multiple charter schools across Southern California
- **Doctoral Researcher** - wrote dissertation "Charter Schools and Market Segmentation" applying statistical analysis to educational systems

Current Mathematical Innovation: Mobile Math and Science Labs

LinkedIn Feature: [Recent updates available on LinkedIn profile]

Dr. Batie's most impactful current work involves the creation of "Mobile Math and Science Labs for the effec[tive delivery of STEM education]," which uniquely combines mathematical pedagogy with hands-on engineering applications to address educational disparities in underserved communities.

Mathematical Innovation:

- **Cross-Disciplinary Model:** Educational mathematics frameworks that incorporate real-world aerospace engineering applications
- **Computational Approach:** Hands-on mathematical experiences that mirror the computational thinking used in spacecraft engineering
- **Real-World Application:** Practical mathematical problem-solving that prepares students for 21st century STEM careers

Leadership in Mathematical Community Building

As President of the Los Angeles Council of Black Professional Engineers, Dr. Batie leads efforts to "re-energize the Black engineering community to provide positive real and role models to increase participation in STEM careers." His work recognizes that mathematical proficiency is the foundation for engineering success and focuses on creating pathways for

underrepresented students to develop both mathematical confidence and engineering expertise.

Community Impact Through Mathematics:

- **Mentorship Programs:** Connecting experienced engineers with students to demonstrate real-world mathematical applications
- **Educational Reform:** Advocating for mathematics education that emphasizes practical engineering applications
- **Cultural Change:** Working to shift perceptions about mathematics as an accessible and essential skill for success

Academic Contributions & Research

Dr. Batie's doctoral research on "Charter Schools and Market Segmentation" represents a unique application of mathematical analysis to educational policy, using statistical methods and market analysis to understand educational outcomes and system effectiveness.

Research Mathematical Components:

- **Statistical Analysis:** Applied statistical methods to analyze educational market dynamics
- **Data Modeling:** Used mathematical models to understand charter school effectiveness
- **Policy Mathematics:** Applied quantitative analysis to inform educational policy decisions

Broader Impact: Mathematics as Universal Gateway

Through his interdisciplinary approach spanning aerospace engineering, education, and community leadership, Dr. Batie demonstrates that mathematics is indeed the universal language that enables engineers to solve complex challenges while also serving as the foundational skill that opens doors to success across all fields. His work shows how mathematical thinking transcends traditional boundaries between technical professions and educational transformation.

Legacy Focus:

- **Technical Excellence:** 50 years of applying mathematics to solve aerospace engineering challenges

- **Educational Innovation:** Pioneering approaches to mathematics education that connect to real-world engineering applications
- **Community Leadership:** Building mathematical confidence and engineering aspirations in underrepresented communities
- **Systemic Change:** Working to transform educational systems and community attitudes toward mathematics

Dr. Batie's career exemplifies how mathematical expertise, when combined with educational vision and community commitment, can create lasting change that extends far beyond individual technical achievements to transform entire communities and inspire the next generation of engineers and mathematicians.